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(71) Applicant (for all designated States except US): **ABB AB**
[SE/SE]; Kopparbergsvägen 2, S-SE-721 83 Västerås (SE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CARLSON, Erik**
[NO/NO]; Karl Pedersens vei 45, N-1450 Nesoddtangen

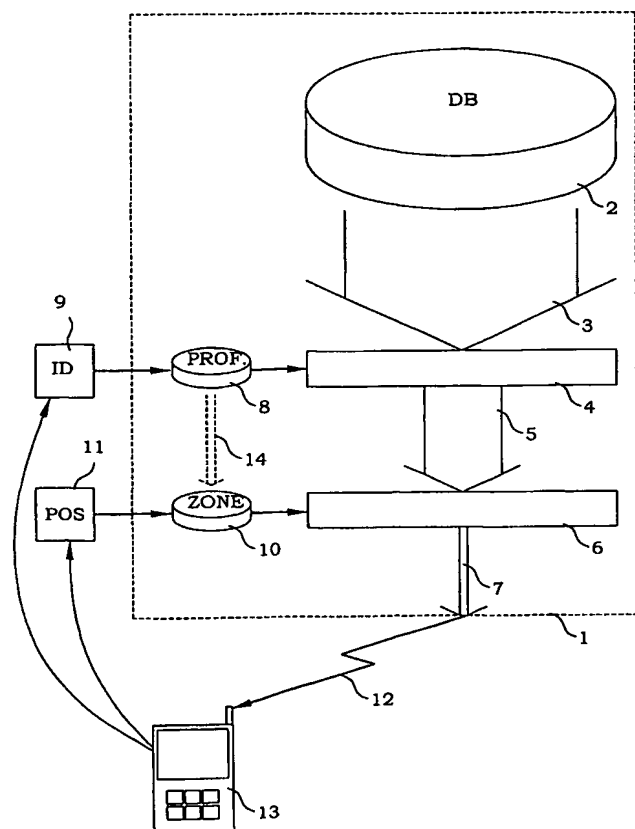
(NO). **FODOR, George** [SE/SE]; Medelpadsvägen 9, S-722 44 Västerås (SE). **GERTMAR, Lars** [SE/SE]; Humlegatan 6, S-722 26 Västerås (SE). **NOLEMO, Jan-Anders** [SE/SE]; Karlfeldtsgatan 37B, S-722 22 Västerås (SE).

(74) Agent: **ABB GROUP SERVICES CENTER AB**; Legal & Compliance/Intellectual Property, Forskargränd 8, S-721 78 Västerås (SE).

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(54) Title: METHOD AND SYSTEM FOR SENDING LOCALIZATION AND IDENTITY DEPENDENT INFORMATION TO MOBILE TERMINALS



(57) Abstract: The present invention discloses methods and devices, with which a selection action of information is performed in a central system before communicating the selected information to a user terminal. This selection (4,6) is according to the invention based on a least both the identity (9) of the user and the position (11) of the user terminal. By using relations between identity (9) and profiles (8) a first information filtering can be achieved. By further using relations between the actual position (11) of the user terminal and the constitution of the industrial automation facility, information irrelevant for the parts in the vicinity of the user terminal is removed. Preferably, also the operational situation of the facility and the history of the user actions are used for filtering or prioritising the information. The most prioritised data quantity is communicated (12) to the user terminal (13) and displayed at a user terminal display. If all the data, despite the sifting, is too extensive to be shown at once on the user terminal (13), the user may by one or a few key presses or mouse actions zap between different parts of the relevant information.

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AMENDED CLAIMS

[received by the International Bureau on 28 May 2003 (28.05.03);
Original claims 1-35 replaced by new claims 1-35 (7 pages)]

1. Communication method in an industrial automation facility (40; 70; 90), having a central control and information system (1) and a number of movable user terminals (13) having an information display, said central control and information system having access to databases (2) comprising extensive information about the industrial automation facility (40; 70; 90), comprising the step of:

providing said central control and information system (1) with an identification of a user of a first user terminal (13),

characterised by the further steps of:

determining a present location of said first user terminal (13);

selecting a data quantity from the databases (2) depending on at least both said identification (9) and said present location (11);

said selected data quantity constituting a reduced part of the extensive information about the industrial automation facility (40; 70; 90), adapted to the specific needs of the user;

communicating said selected data quantity from said central control and information system (1) to said first user terminal (13); and

presenting said selected data quantity to said user on said information display of said first user terminal (13),

whereby said user is provided with the most relevant facility information at each instant without taking active measures.

2. Communication method according to claim 1, **characterised** in that said selecting step is dependent on at least one of:

the history of communication to and from said first user terminal (13);

the operational situation of said industrial facility (40; 70; 90),

time, and

date.

3. Communication method according to claim 1 or 2, **characterised** by the further steps of:

inputting data to said first user terminal (13); and
communicating said inputted data to said central control and
information system (1);

whereby said selecting step is dependent on said inputted data.

4. Communication method according to claim 3, **characterised** in that
said inputted data is representative of a predetermined activity of said user.

5. Communication method according to claim 4, **characterised** in that
said predetermined activity is selected from the list of:

maintenance;
supervision; and
education.

6. Communication method according to any of claims 1 to 5,
characterised in that communication to and from said first user terminal
(13) is performed by wireless means.

7. Communication method according to claim 6, **characterised** in that
said location determining step is performed in said first user terminal (13),
and by the further step of communicating data representing said determined
location to said central control and information system (1).

8. Communication method according to claim 6, **characterised** in that
said location determining step is performed in said central control and
information system (1).

9. Communication method according to any of claims 1 to 5,
characterised in that said communication to and from said first user
terminal (13) is performed via stationary connection blocks (28).

10. Communication method according to claim 9, **characterised** in that
said location determining step in turn comprises the steps of:

determining which stationary connection block (28) said first user terminal (13) is connected to; and

relating said determined stationary connection block (28) to a physical location by a predetermined database.

11. Communication method according to any of claims 1 to 10, **characterised** in that said location determining step comprises the step of relating said first user terminal (13) to a zone (30; 30A-K) of predetermined spatial extent, whereby said selecting step is dependent on the identity of said zone (30; 30A-K).

12. Communication method according to claim 11, **characterised** in that said predetermined spatial extent of said zone (30; 30A-K) is dependent on said user identification.

13. Communication method according to any of claims 1 to 12, **characterised** in that said selected data quantity comprises operational data of said industrial automation facility (40; 70; 90).

14. Communication method according to any of claims 1 to 13, **characterised** by the further step of communicating data to and/or from stationary user terminals.

15. Communication method according to any of claims 1 to 14, **characterised** by the further step of communicating data to and/or from external networks (63).

16. Communication method according to any of claims 1 to 15, **characterised** by the further step of relating said identification to at least one of:

- authorisation profile;
- education profile;
- organisation position; and

priority.

17. Communication system in an industrial automation facility (40; 70; 90), comprising:

a central control and information system (1);

a number of movable user terminals (13) having an information display;
and

identification providing means (9) for providing said central control and information system (1) with an identification of a user of a first user terminal (13);

said central control and information system (1) having access to at least one database (2),

said database (2) comprising extensive information about the industrial automation facility (40; 70; 90),

characterised by:

locator means (11) for determining a present location of said first user terminal (13);

selector means for selecting a selected data quantity from said database (2);

said selector means being connected to at least both said identification providing means and said locator means;

said selected data quantity constituting a reduced part of the extensive information about the industrial automation facility (40; 70; 90), adapted to the specific needs of the user; and

communication means for communicating said selected data quantity from said selector means to said first user terminal (13);

said information display of said first user terminal (13) being arranged for presenting said selected data quantity to said user;

whereby said user is provided with the most relevant facility information at each instant without taking active measures.

18. Communication system according to claim 17, **characterised** in that said selector means has access to additional information selected from the list of:

the history of communication to and from said first user terminal (13),
the operational situation of said industrial facility (40; 70; 90),
time, and
date.

19. Communication system according to claim 17 or 18, **characterised** in that said first user terminal (13) further comprises means for inputting data and in that said communication means is arranged also for communicating data from said first user terminal (13) to said central control and information system (1), said selector means having access to at least a part of said data from said first user terminal (13).

20. Communication system according to claim 19, **characterised** in that said inputted data is representative of a predetermined activity of said user.

21. Communication system according to claim 20, **characterised** in that said predetermined activity is selected from the list of:

maintenance;
supervision; and
education.

22. Communication system according to any of claims 17 to 21, **characterised** in that said communication means is a wireless communication means.

23. Communication system according to claim 22, **characterised** in that said first user terminal (13) comprises said locator means, said communication means being arranged to communicate data representing said determined location to said central control and information system (1).

24. Communication system according to claim 22, **characterised** in that said central control and information system (1) comprises said locator means.

25. Communication system according to any of claims 17 to 21, **characterised** in that said communication means comprises wires connected via stationary connection blocks (28).

26. Communication system according to claim 25, **characterised** in that said locator means in turn comprises:

means for determining which stationary connection block (28) said first user terminal (13) is connected to; and

means for relating said determined stationary connection block (28) to a physical location by a predetermined database.

27. Communication system according to any of claims 17 to 26, **characterised** in that locator means comprises means for relating said first user terminal (13) to a zone (30; 30A-K) of predetermined spatial extent, said selector means having access to the identity of said zone (30; 30A-K).

28. Communication system according to claim 27, **characterised** in that said predetermined spatial extent of said zone (30; 30A-K) is dependent on said user identification.

29. Communication system according to any of claims 17 to 28, **characterised** in that said selected data quantity comprises operational data of said industrial automation facility (40; 70; 90).

30. Communication system according to any of claims 17 to 29, **characterised** in that said communication means is further arranged for communicating data to and/or from stationary user terminals.

31. Communication system according to any of claims 17 to 30, **characterised** in that said communication means is further arranged for communicating data to and/or from external networks (63).

32. Communication system according to any of claims 17 to 31, **characterised** in that said database comprises means for relating said identification to at least one of:

- authorisation profile;
- education profile;
- organisation position; and
- priority.

33. A computer program product comprising computer code means and/or software code portions that when run on a computer or processor make the processor carry out the steps of the method of any of claims 1 to 16.

34. A computer program product according to claim 33 provided via a network, such as the Internet.

35. A computer readable medium including a computer program product according to claim 33 or 34.